1515. VICIA DUMETORUM.

Vetch.

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

1516. Onobrychis onobrychis.

Common sainfoin.

From France. Received through Mr. W. T. Swingle, December, 1898. (33 packages.)

"Sainfoin ordinaire." "Bourgogne esparcette."

"A deep-rooting perennial legume, extensively cultivated in the temperate portions of Europe on dry, calcareous soils which are too barren for clover or alfalfa. The stems are erect or ascending, 1 to 2 feet high, ribbed and downy, the leaves unequally pinnate, composed of 6 to 12 pairs of opposite leaflets, with an odd terminal one. The bright pink flowers are numerous in spike-like racemes, borne on a long stalk. A permeable, well-drained subsoil is essential for its growth. Like alfalfa, it is quickly killed whenever the ground becomes saturated with water, and is therefore not suited for growth in wet meadows or in marshy lands. There is no better plant for growing on barren hills, but it does better on the sunny slopes than those facing north. It is rather difficult to establish, as the plants are easily killed when young, but when once well rooted, sainfoin will live from twenty to twentyfive or sometimes a hundred years, provided the soil is rich enough. One crop of hay can be cut each year. It should be cut at the time of full bloom, which in the latitude of Washington, D. C., is about the 1st of May. In England the average yield ranges from $1\frac{1}{2}$ to $2\frac{1}{2}$ tons per acre, and the hay is better and more natritious than that of red clover. Eighty pounds of seed should be sown per acre, anytime from the middle of May to the end of June, and, unlike alfalfa, it should be covered quite deeply to insure germination. If shelled seed is to be had, half as much will suffice. Fresh seed must always be used, as it loses its vitality if kept a year. It can be grown in any part of the United States, and should be more extensively cultivated, especially in localities where the ground is too dry and too barren for red clover. The yield of seed ranges from 10 to 25 bushels of 40 pounds. Sainfoin should not be pastured closely, as it does not have the same recuperative ability as the clovers." (Jared G. Smith.)

1517. Onobrychis onobrychis.

Sainfoin.

From France. Received through Mr. W. T. Swingle, December, 1898. (23 pack-

"Sainfoin à deux coupes" (double-cropping sainfoin).

This has been given the varietal name biferum (two-cropped).

Perennial, hardy. More vigorous than the preceding, giving ordinarily two cuts, but requiring for this a richer land. Preferred to the preceding in mixtures with clover, lucern, or other plants of which more than one cutting is required."

The seed weighs 23 to 25 pounds per bushel, and 125 to 156 pounds is sown per acre.

1518. HEDYSARUM CORONARIUM.

Sulla.

From France. Received through Mr. W. T. Swingle, December, 1898. (26 packages.)

"Sainfoin d'Espagne" (Spanish sainfoin).
Perennial or biennial, very vigorous and rich in fodder, of doubtful merit; cultivated in Sicily and Calabria; can not bear the winter in the latitude of Paris, but succeeds perfectly in Algiers.

Seed not abundant in commerce, weighing 15½ to 19 pounds per bushel; sown at the rate of 90 pounds per acre.

1519. Phalaris canariensis.

Canary grass.

From France. Received through Mr. W. T. Swingle, December, 1898. (18 packages.)

"Alpiste." "Graine de Canarie."

"Annual. Seed used as bird feed; the straw is very good fodder for horses and horned cattle. It is frequently used in mixtures for forage to be cut green. For the seeds, it is to be sown broadcast on well-worked, wholesome, and well-manured